WHAT IS CLAIMED IS:

- 1. A self-anchoring mast that deploys a high-speed submersible mixer in a tank, comprising:
 - a) a first mast member;
 - b) a second mast member operably connected to said first mast member; and
 - a foot member operably connected to said second mast member to support said self-anchoring mast in a tank.
- The mast of Claim 1, wherein:
 said second mast member comprises attachment means to connect a mixer thereto.
- 3. The mast of Claim 2, wherein:
 said attachment means comprises first and second tracks to slidably receive a
 bearing of the mixer.
- The mast of Claim 3, wherein:
 said first and second tracks are aligned at approximately a right angle.
- 5. The mast of Claim 3, wherein:

 said first track extends in a first direction that is the same as the axial direction of said first mast member; and said second track extends in a second direction at approximately a right angle to said first direction.

DOE Cas S-91,052

6. The mast of Claim 5, wherein:

said foot member includes a support base and a bearing assembly;

said bearing assembly is fixedly attached to said second mast member; and

wherein said second mast member is rotatable relative to said support base.

7. A self-anchoring mast that deploys a high-speed submersible mixer in a tank, comprising:

- a) an upper mast member;
- a lower mast member operably connected to said upper mast member;
- a foot member operably connected to said lower mast member to
 support said self-anchoring mast in a tank;
- said lower mast member including attachment means to connect a mixer thereto; and
- e) said attachment means comprising first and second tracks that slidably receive a bearing of the mixer.
- 8. The mast of Claim 7, wherein:said first track extends axially in the same direction as said upper mast member.

5

- 9. The mast of Claim 8, wherein: said second track extends at approximately a right angle to said upper mast member.
- 10. The mast of Claim 9, wherein: said foot member includes a support base and a bearing assembly; said bearing assembly is fixedly attached to said lower mast member; and wherein said lower mast member is rotatable relative to said support base.
- The method of deploying a high-speed submersible mixer in a tank, comprising the steps of:
 - providing a self-anchoring mast, comprising; a)
 - i) a first mast member;
 - a second mast member operably connected to said first mast ii) member; and
 - a foot member operably connected to said second mast iii) member for supporting the mast in a tank;

5

DOE Case S-91,052

- b) connecting a mixer to the second mast member such that the mixer extends in the same direction as the second mast member;
- c) lowering the mast with the mixer in a tank; and
- d) rotating the mixer relative to the second mast member such that the mixer extends generally transversely thereto.
- 12. The method of Claim 11, further comprising the step of:
 - e) further lowering the mast in the tank until the foot member comes to rest on the bottom of the tank.